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#### SUPPLEMENTARY INFORMATION:

##### BACKGROUND

In the FEDERAL REGISTER of May 26, 1977 (42 FR 27009-27011), the Fish and Wildlife Service published a proposed determination of critical habitat for the Houston toad (*Bufo houstonensis*). This critical habitat was described as:

(A) *Bastrop County*. From the junction of a line corresponding to 30°12'00" N. and Texas State Highway 95 east along a line corresponding to 39°12'00" N. to where it intersects a line corresponding to 97°7'30" W. to where it intersects the Colorado River, west and northwest along the north bank of the Colorado River to the city limits of Bastrop, and north through Bastrop along Texas State Highway 95 to where it intersects a line corresponding to 30°12'00" N.

(B) *Burleson County*. A circular area with a one mile radius, the center being the north entrance to Lake Woodrow from Texas FM 2000.

(C) *Harris County*. At the northwest corner of Houston, Tex., from the junction of Tanner and Brittmoore Roads east on Tanner Road to its junction with Gessner Road, south on Gessner Road to its junction with Clay Road, west on Clay Road to its junction with Brittmoore Road, and north on Brittmoore Road to its junction with Tanner Road.

(D) *Harris County*. Six areas in south Houston and Pasadena, Tex. (1) From the junction of Harwin Drive and Fondren Road east on Harwin Drive to its junction with the Southwest Freeway, southwest on the Southwest Freeway to its junction with Fondren Road, and north on Fondren Road to its junction with Harwin Drive.

(2) From the junction of Hillcroft Avenue and South Main Street northeast on South Main Street to its junction with Holmes Road, northeast on Holmes Road to its junction with Knight Road, south on Knight Road to its junction with Alameda Road, northwest on Alameda Road to its junction with West Orem Drive, west on West Orem Drive to its junction with South Post Oak, south on South Post Oak to its junction with Sims Bayou, west along the north bank of Sims Bayou to where it crosses Hillcroft Avenue, and north on Hillcroft Avenue to its junction with South Main Street.

(3) From the junction of the Gulf Freeway and Shawnee Drive east on Shawnee Drive to its junction with Rodney, south on Rodney to its junction with Edgebrook Drive, southwest

on Edgebrook Drive to its junction with the Gulf Freeway, and northwest on the Gulf Freeway to its junction with Shawnee Drive.

(4) From the junction of Vista Road and Maple east on Vista Road to its junction with Watters Road, south on Watters Road to its junction with Crenshaw Road, west on Crenshaw Road to its junction with Young, north on Young to its junction with Snodden Avenue, east on Snodden Avenue to its junction with Maple, and north on Maple to its junction with Vista Road.

(5) From the junction of Carson and Martindale south on Martindale to its junction with Alameda-Genoa Road, east on Alameda-Genoa Road to its junction with Mykawa Road, south on Mykawa Road to its junction with Clear Creek, east along the north bank of Clear Creek to where it crosses Telephone Road, north on Telephone Road to its junction with Fuqua, east on Fuqua to its junction with the Gulf Freeway, northwest on the Gulf Freeway to its junction with Meldrum, west on Meldrum to its junction with Monroe Road, south on Monroe Road to its junction with Lanham, west on Lanham to its junction with Telephone Road, north on Telephone Road to its junction with Brisbane, west on Brisbane until it ends, then continuing due west on a line which would intersect Mykawa Road near its junction with Selinsky Road, south on Mykawa Road to its junction with Carson, and west on Carson to its junction with Martindale.

(6) From the point at which Horsepen Bayou crosses Bayarea Boulevard, northeast on Bayarea Boulevard to the point at which it begins to form the southeastern boundary of the city of Pasadena north and northwest along the western Pasadena city boundary to where it contacts the Houston City boundary, west along the southern boundary of Houston to where it crosses Horsepen Bayou, and southeast along the north bank of Horsepen Bayou to where it crosses Bayarea Boulevard.

In the May 26, 1977, FEDERAL REGISTER proposed rulemaking (42 FR 27009-27011) and associated May 27, 1977, press release, all interested parties were invited to submit factual reports or information which might contribute to the formulation of a final rulemaking.

All public comments received during the period May 26, 1977, to December 2, 1977, were considered.

##### SUMMARY OF COMMENTS AND RECOMMENDATIONS

Comments were received from 26 individuals and organizations. Of these, 16 were in favor of all or most parts of the proposal, seven were opposed to all

#### [4310-55]

Title 50—Wildlife and Fisheries

#### CHAPTER I—U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

#### PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

##### Determination of Critical Habitat for the Houston Toad

AGENCY: Fish and Wildlife Service,  
Interior.

ACTION: Final rule.

SUMMARY: The Service determines critical habitat for the Houston toad (*Bufo houstonensis*) in a portion of its range. This rule requires all Federal agencies to insure that actions authorized, funded, or carried out by them do not adversely affect this Critical Habitat. The areas determined as critical habitat are located in Bastrop and Burleson Counties, Tex.

DATE: This rule becomes effective on March 3, 1978.

FOR FURTHER INFORMATION  
CONTACT:

or parts of the proposal, and three expressed no direct opinion on the proposal but added information relating to their specific organization or agency.

Congressman Bob Gammage (22nd District, Texas) expressed concern that, should the proposed Critical Habitat area remain unchanged, development in Harris County could be frozen. He also stated that he had been informed that the boundaries were scientifically unsubstantiated and that the lines for the boundaries were arbitrarily drawn. He suggested that public lands be evaluated, such as Clear Creek and Armand Bayou, since these areas would not be likely to be encroached on by private interests. This would be of great value to the orderly development of Harris County, according to Congressman Gammage. Finally, he felt a compromise could be reached that would allow development in Harris County and will prevent intrusion on the habitat of the Houston toad.

Ted L. Clark (Director, Wildlife Division, Texas Parks and Wildlife Department) concurred with six of the proposed areas, recommended the deletion of one, and expansion of the remaining two. Specific recommendations of that Department were:

A. The Department concurs with the Bastrop County area as defined in the proposed rules since Department personnel have observed this species there in moderate numbers in each of the last four years (1974-1977).

B. The Department also concurs with the area proposed as Critical Habitat in Burleson County since Dr. Robert A. Thomas, Texas A & M University, has found the Houston toad there in low numbers in each of the last four years (1974-1977).

C. The Department recommends that the northwest corner of Houston, Tex., be modified to include that portion of Addicks Reservoir southwest of the reservoir levee east of Longitude 90°35'23" and north of Latitude 29°50'35". Although Houston toads have not been reported from the Addicks Reservoir area, the habitat there is almost identical to that of the type locality a short distance away.

D. Harris County, six areas in South Houston and Pasadena. Based on the information furnished by Mr. William L. McClure, Texas Department of Highways and Public Transportation, in conjunction with our research and others, the Texas Parks and Wildlife Department recommends the following:

1. That the triangle between Harwin, Fondren and the Southwest Freeway be deleted since practically all of the land surface is covered with commercial, industrial, or residential development and is drained by underground storm sewers. Therefore, the area

cannot be considered Houston toad habitat.

2. That the area as defined in the proposed rules by junction of Hillcroft Avenue-South Main-Holmes Road-Knight Road-Alameda Road-West Orem Drive-South Post Oak-Sims Bayou-Hillcroft Avenue be designated as critical habitat. Although no recent Houston toad observations have been recorded for the area which has been approximately one-third developed, it does contain suitable habitat and the Houston toad might reasonably be expected to exist there.

3. That the area bounded by the Gulf Freeway, Shawnee Drive, Rodney, and Edgebrook Drive be considered as critical habitat since Houston toads were observed in this area in 1975 and 1976.

4. That the area bounded by Vista Road, Watters Road, Crenshaw Road, Young, Snodden Avenue, and Maple Road be designated as critical habitat since Houston toads were observed in this area in 1976.

5. That the area bounded by Carson, Martindale, Alameda-Genoa Road, Mykawa Road, Clear Creek, Telephone Road, Fuqua, Gulf Freeway, Meldrum, Monroe Road, Lanham, Telephone Road, Brisbane, Mykawa, and Carson Road be considered as critical habitat since historically, Houston toads have been previously recorded there in good numbers, though none have been recently observed.

6. That the area near Horsepen Bayou be expanded as follows: "Horsepen Bayou intersection with Bay Area Boulevard, northwest along the west bank of Armand Bayou to Genoa-Red Bluff Road, west along Genoa-Red Bluff Road to a projected extension of the easternmost north-south runway of Ellington Air Force Base, south along the extended line of such runway to its intersection with Horsepen Bayou, and easterly along the north bank of Horsepen Bayou to Bay Area Boulevard. This expansion would include additional suitable habitat in which the Houston toad was observed in good numbers in previous years, though none recently. The habitat where these observations were made has remained relatively unchanged, particularly on Ellington Air Force Base."

Finally, Mr. Clark stated that the Texas Parks and Wildlife Department will continue to monitor areas of known and potential Houston toad habitat in an effort to better delineate the distribution of this Endangered species.

Lauren E. Brown (Illinois State University) stated that he had reviewed all areas of critical habitat and could make no additional alterations. He reviewed his past interest in *B. houstonensis* (research and recommendations

for Endangered status in 1968) and indicated that all of Harris County is potentially critical habitat. He urged the Department of the Interior to resist at all costs any attempts by the City of Houston, the State of Texas, Harris County, or any other private or public special interest groups that pressure the Service to abandoning proposals for critical habitat in the Houston area.

Dr. Brown reiterated that little State, Federal, or local money had been spent on the species in spite of its very critically Endangered status. He states that this is in direct contrast with species such as the whooping crane and California condor. He points out that the Houston toad, with probably not more than 300 individuals in existence, has been repeatedly mentioned by various authors as a species which should have a high priority for protection and rehabilitation. Nevertheless, according to Dr. Brown, this species has been totally neglected. He states that the proposal of critical habitat represents a positive step forward if the Service would pay more attention to conserving this species. He concludes that the Houston toad has a high potential for being saved.

James M. Scott, Jr. (Houston, Tex.) suggested that the area called Sharpstown be deleted as critical habitat but that less developed areas in Harris County in sandy soil be considered. He further suggested some government-owned lands (Ellington Air Force Base, Hobby Airport, Clear Creek, Sims Bayou, Addicks Reservoir, Barker Reservoir, Texas state prison farm near Sugarland and Rosharon, and the 100-year flood plain areas of Oyster Creek and the Brazos River near Houston) be considered. He also recommended an area in Fort Bend County bounded by the Brazos River, Route 723 north of Rosenberg, Oyster Creek downstream past Sugarland, Dewalt to Juliff or the Brazoria County line be designated as critical habitat. He also stressed a critical habitat designation solely on biological grounds and that, although toads can't vote, we must protect such Endangered animals.

W. L. McClure (Houston, Tex.) recommended deletion of area D(1) and that the southern parts of areas D(2) and D(5) should also be deleted from any final rulemaking. Mr. McClure commented on development in Harris County and stated that government-owned areas, such as Ellington Air Force Base and Barker and Addicks Reservoir, should be preserved as a sanctuary for the Houston toad. He stated that land preserves and a captive breeding program are really the only ways to ensure the survival of the species in Harris County.

James Dixon (Texas A & M University) found the evaluation of habitat

in the proposal as adequate but recommended the deletion of the Sharpstown area. He also suggested including Ellington Air Force Base since the Houston toad and Attwater's prairie chicken are there. He recommended the purchase of the Burleson County area and highly recommended the other proposed sites, especially the Bastrop County site, be included in a final rulemaking.

The following individuals endorsed the proposal in its entirety, or with the deletion of the Sharpstown area. In addition, several individuals also requested that the Ellington Air Force Base be included in future considerations of critical habitat: Robert A. Thomas (Louisiana State University Medical Center), William A. Butler (Environmental Defense Fund), Eugene I. Majerowicz (Los Angeles, Calif.), D. Marrack (Bellaire, Tex.), J. A. Rochelle (Francis and Francis, Dallas, Tex.), J. W. Akers (Sierra Club, Houston Regional Group), Raymond H. McDavid (Outdoor Nature Club of Houston), Morton Rich (Houston, Tex.), W. F. Blair (University of Texas at Austin), and Stanley McBee (Houston, Tex.).

R. L. Lewis (Chief Engineer of Highway Design, State Department of Highways and Public Transportation) listed a series of roads in Bastrop, Burleson, and Harris Counties which would probably be affected by the proposed Critical Habitat determination.

Mr. Lewis stated that it is doubtful the areas proposed as Critical Habitat by the Service will lead to ensuring the survival or recovery of the Houston toad because:

1. Within Critical Habitats, it appears that only those proposed actions with Federal involvement are covered; private actions are not. Very little of the proposed Critical Habitat is under Federal control.

2. The Critical Habitats proposed for Harris County in some cases are already developed urban areas; in others, they fall directly in the path of current urban growth. Even if the proposed Critical Habitats are adopted, the enormous growth pressures for industrial, commercial, and residential development in the rapidly growing Houston metropolitan area will most likely result in the alteration of such areas by privately financed ventures.

3. One reason for diminished Houston toad population is loss of habitat—which Critical Habitat determination may or may not deter. Another probably more significant factor is interspecies hybridization and competition with the Gulf Coast toad (*Bufo valli-ceps*). This species apparently readily adjusts to the changing environment in the Houston area while the Houston toad does not. Accordingly, even if the proposed Critical Habitats could in some way preserve the status quo

within such areas, the drainage and other developmental alterations taking place in the areas surrounding the Critical Habitats would not limit this more dominant species—nor its competition and hybridization with whatever Houston toad populations might possibly be present in the Critical Habitat areas.

Accordingly, Mr. Lewis suggested as an alternative to include Addicks and Barker Flood Protection Reservoirs, Ellington Air Force Base, and Armand Bayou Park as areas which could be Critical Habitat. In view of the scarcity of the toad in Harris County, appropriate agencies should obtain specimens which could be established in those areas, according to Mr. Lewis.

L. Diane Schenke, representing Vinson and Elkins, Attorneys at Law, submitted three lengthy letters on behalf of clients of her firm. She objected to several of the areas in Harris County being included as Critical Habitat saying that: (1) The proposal is not biologically justified because of soil types; (2) the designation is arbitrary and capricious because the final report on a Houston toad study contracted by the Service had not been received at the time the proposal was published in the *FEDERAL REGISTER*; (3) the Houston toad has a tendency to hybridize in the areas of proposed Critical Habitat and that there are other more appropriate habitats available; and (4) the Service has not fulfilled the obligations of § 102(C) of the National environmental Policy Act. In addition, comments were made on the degree of development in some areas, as in Sharpstown, which she stated would preclude the presence of the toad in that area.

All Ms. Schenke's letters contained comments on the general life history of *Bufo houstonensis*; most of here statements were based on papers published in the early 1970's. She also doubted the validity of *B. houstonensis* as a species because it was separated from other species only on morphological grounds. Each of her main points were elaborated on, and she included appropriate maps with each of her letters.

W. A. Sweitzer (Johnson-Loggins, Inc.) commented on only one of the six proposed areas in Harris County—the area D-2 of the proposal. Mr. Sweitzer reviewed development in this area and enclosed a report by W. L. McClure, a consultant, which indicated for the most part that conditions do not support biological reasons to classify this particular area as Critical Habitat. Mr. Sweitzer concluded that the Service should not include this area in a final rulemaking without specific biological study.

David S. Wolff (Wolff, Morgan and Company) commented on the proposed area in northwestern Harris

County. Mr. Wolff referred extensively to a 1975 report (Federal Aid Project No. W-103-R-5) which did not mention Houston toads in Harris County since 1967, and which stated that landowners had been contacted. Mr. Wolff mentioned that habitat modification is continuing to occur in the area in northwest Houston, and that there was little reason to suspect that *B. houstonensis* still exists in this area. Mr. Wolff questioned why private property should be designated Critical Habitat while 1,000 feet to the west, Addicks Reservoir, a 14,000 acre public property, should not be so designated. Mr. Wolff also stated that he had never been contacted by anyone about Houston toads.

Errol J. Donahue (Houston, Tex.) stated humans should not be displaced because of toads.

Colonel Luis F. Dominguez (Chief, Environmental Planning Division, U.S. Air Force) requested a threshold examination with regard to this species for areas on Ellington Air Force Base. Richard Broun (Office of Environmental quality, Department of Housing and Urban Development) commented that the Regional Office in Dallas had several recently approved or pending applications for funding assistance, and that the applicants have been informed of the Critical Habitat proposal. Each project would have to be reviewed in light of circumstances existing at that time. John R. Hill, Jr. (Corps of Engineers, U.S. Army) submitted information on the biology of the Houston toad and listed a series of projects which might be affected by a Critical Habitat designation and suggests specific methods be developed to insure the preservation of Critical Habitat.

Finally, the week of October 17-21, 1977, a review team consisting of Fish and Wildlife Service personnel, consultants to the Service, and a representative of the Texas Parks and Wildlife Department met in Houston and reviewed all areas proposed as Critical Habitat in Bastrop, Burleson, and Harris Counties.

#### CONCLUSION

**Bastrop County.** The Service believes this is the best locality presently known for the Houston toad. The only problem with the *FEDERAL REGISTER* proposal for this site was the boundary around the town of Bastrop. The proposal reads " \* \* \* west and northwest along the north bank of the Colorado River to the city limits of Bastrop, and north through Bastrop along Texas State Highway 95 \* \* \* ." This is hereby changed to " \* \* \* west and northwest along the north bank of the Colorado River to the due southward extension of Texas State Highway 95, and north along that extension and Texas State Highway 95 \* \* \* ." The